



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/815,384	04/01/2004	Eilaz Babacv	103514-0011-103	7585

7590
Matthew P. Vincent, Esq.
Ropes & Gray LLP
One International Place
Boston, MA 02110-2624

10/05/2007

EXAMINER

CHENG, JACQUELINE

ART UNIT	PAPER NUMBER
----------	--------------

3768

MAIL DATE	DELIVERY MODE
-----------	---------------

10/05/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

88

Office Action Summary	Application No. 10/815,384	Applicant(s) BABAEV, EILAZ	
	Examiner Jacqueline Cheng	Art Unit 3768	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 29 May 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-17, 37-49 and 63-81 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 37-49 and 63-81 is/are allowed.
- 6) ☒ Claim(s) 1-5, 8-13 and 15-17 is/are rejected.
- 7) ☒ Claim(s) 6, 7 and 14 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>2/12/07, 5/29/07</u> | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Arguments

1. Applicant's arguments filed May 29, 2007 have been fully considered but they are not persuasive. The examiner respectfully disagrees with the applicant's arguments that Gerasimenk (SU 1106485) does not anticipate the claimed invention of claim 1 and 63. Gerasimenk explicitly discloses all that is claimed of applying medicinal solution to a wound cavity, then immersing a waveguide in the medicinal solution (not touching the tissue, only the medicinal solution), then spraying the wound with a liquid medicament spray, that the use of his invention for reducing the time required to treat infect wounds (or in other words increasing the healing time by providing a therapeutic effect to the wound). What Gerasimenk does not explicitly disclose is the energy and medicament penetrating the tissue. However Gerasimenk teaches using a frequency range of 20-100 kHz of which it is well known and inherent that this range penetrates the tissue. It is also well known and inherent that when this range is applied to a medicament, such as in Gerasimenk, the medicament will penetrate the tissue. Many patents, for example Kost (US 6,041,253), discloses this information. Kost discloses a well known process called sonophoresis where the application of ultrasound, in the range of 20-40 kHz (which Gerasimenk uses), is used to facilitate transport of a drug (therapeutic agents) through the skin (col. 4 line 42-63).
2. Gerasimenk does not teach claim 63 as amended in where the liquid spray and the medicament are 2 separate things.
3. As to claim 37, as discussed above Gerasimenk does teach most of what is disclosed. Gerasimenk does not explicitly disclose the details of how his ultrasonic spraying device works

Art Unit: 3768

so it would be obvious to one skilled in the art to use one that is well known in the art such as the ultrasonic spraying device of Anthony (US 4,679,551) which comprises the liquid in a reservoir and to be sprayed from a distal radiation surface. But the amended claim 37 wherein the liquid spray and the medicament are two separate things this rejection overcomes this rejection.

4. As to the applicant's argument of the combination of Duarte (US 6,273,864 B1), the examiner respectfully disagrees that they cannot be combined because Duarte is directed to contact ultrasound while the application is directed to non-contact ultrasound. Duarte is used to show that the ultrasound range that Gerasimenk is using of 26 kHz decreases healing time by stimulating regeneration of cells. This is something well known in the general art of ultrasound, which can be non-contact or contact ultrasound.

5. The applicant is reminded that the double rejection still stands, but the examiner holds it in abeyance as asked until the case is in condition for allowance.

6. Examiner also notes that Cite No. AM of IDS dated May 29, 2007 was not considered as it is the current application.

Claim Rejections - 35 USC § 102

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

8. **Claims 1-5, 8-11, 15, 16** are rejected under 35 U.S.C. 102(b) as being anticipated by Gerasimenk (SU 1106485) as discussed in paragraph 1 above and the previous office action

Art Unit: 3768

dated March 9, 2007. ("Gerasimenk discloses delivering ultrasonic energy of a frequency range of around 26.5 kHz from a non-contact distance of about 3-10 mm from the wound surface. A medicinal solution, such as an antiseptic solution, is sprayed onto the wound surface and is subjected to the action of the ultrasound, sonicating the medicament. The ultrasound and the medicament is applied to reduce the time required to treat the wounds, which helps to heal the wound (providing a therapeutic effect), decreasing the time the wounds takes to heal (abstract).")

Claim Rejections - 35 USC § 103

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10. **Claims 12 and 13** are rejected under 35 U.S.C. 103(a) as being unpatentable over Gerasimenk. Gerasimenk is not clear on whether the medicinal solution is applied before applying the ultrasound, or during application of the ultrasound. Either method is capable as the medicinal solution can be applied first, and then the ultrasound delivered, also the ultrasound waves can be applied while the medicinal solution is being applied.

11. **Claims 17** are rejected under 35 U.S.C. 103(a) as being unpatentable over Gerasimenk further in view of Duarte (US 6,273,864 B1). Gerasimenk does not explicitly disclose how the ultrasonic application reduces the time required to treat infected wounds, but it is well known in the general art of ultrasound (which can be contact or non-contact) that providing ultrasonic

Art Unit: 3768

waves in the frequency ranged of 26 kHz decreases healing time by stimulating regeneration of cells as disclosed by Duarte (col. 6, line 35-44).

Allowable Subject Matter

12. **Claims 6, 7, and 14** are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

13. **Claims 37-49 and 63-81** allowed.

Conclusion

14. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. US 2002/0177846 A1 to Mulier.

15. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a).

Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event,

Art Unit: 3768

however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

16. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jacqueline Cheng whose telephone number is 571-272-5596.

The examiner can normally be reached on M-F 10:00-6:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Eleni Mantis-Mercader can be reached on 571-272-4740. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

JC


ELENI MANTIS MERCADER
SUPERVISORY PATENT EXAMINER